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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,087	01/31/2004	Mario Rabinowitz		9268

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EXAMINER

TRA, TUYEN Q

ART UNIT PAPER NUMBER

2873

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/770,087	RABINOWITZ ET AL.	
	Examiner	Art Unit	
	Tuyen Q Tra	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The declaration filed 01/31/04 is acceptable.

Claim Objections

2. Claim 20 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 7.

When these claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Claims 5 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claims 1 and 14. Applicant is required to cancel the claims 5 and 18, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form.

Claims 5 and 18 recited “said electric dipoles are induced ...” which are not further limit of “induced electric dipoles” of claims 1 and 14.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 14 recites the limitation “induced electric dipoles” in line

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10. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is needed.

Claims 2-7 and 15-20 are rejected because they are dependent on at least one of about rejected claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 7-9, 11-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverman (U.S. Pat. 6,122,094 A).

a) With respect to claims 1, 8 and 14, Silverman discloses an additive color electric paper without registration or alignment of individual elements and method of an array of micro-mirrors (item 1, Fig. 1) rotatably disposed in a substrate; electric dipoles in the rotatable micro-mirrors (1); the apparatus having a plurality of addressable elements; two bus bars connected to opposite poles of at a voltage source; at least two sets of opposing rung electrodes (item 120) which orthogonally criss-cross each other and are separated by dielectrics (Fig. 8); the rung electrodes (120) electrically connected to at least two of the bus bars for electric field coupling to the induced electric dipoles; and mean for selectively addressing each pair of the bus bars (Fig. 7).

b) With respect to claims 2, 9 and 15, Silverman further discloses wherein there are at least three independent voltage sources connected to at least three pairs of rung electrodes (120) (Fig. 8).

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- c) With respect to claims 3, 11 and 16, Silverman further discloses wherein array of micro-mirrors are disposed between a top transparent electrode opposite a bottom electrode connected to an independent voltage source.
- d) With respect to claims 4, 12 and 17, Silverman further discloses array of micro-mirrors are disposed between a top grid electrode opposite a bottom electrode connected to an independent voltage source.
- e) With respect to claims 7, 13 and 20, Silverman further discloses wherein a group of the micro-mirrors are given the same alignment.

Allowable Subject Matter

7. Claims 6 and 19 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The reason for the indication of allowable subject matter is that (claims 6, 19) wherein an electret is placed adjacent to each micro-mirror so that its permanent electric dipole is parallel to the induced electric dipole disclosed in the claims is not found in the prior art.

8. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for the indication of allowable subject matter is that the step of placing an electret adjacent to each mini-mirror so that its permanent electric dipole is parallel to the induced electric dipole disclosed in the claims is not found in the prior art.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Rabinowitz et al.(US 6,738,176 B2) discloses a dynamic multi-wavelength switching ensemble comprising of rotatable mirror balls (1) with embedded mirror (2), electric dipoles in the rotatable mirrors; however, Rabinowitz et al. (176') fails to teach or suggest sets of opposing rung electrodes which orthogonally criss-cross each other and separated by dielectrics.

b) Crowley (US 5,808,783 A) discloses a high reflectance gyricon display in Figure 3A with rotatable mirror balls (332), with reflected surface (white part of the balls) embedded in the mirrors; however, Crowley fails to teach or suggest electric dipoles in the rotatable mirrors and sets of opposing rung electrodes which orthogonally criss-cross each other and separated by dielectrics.

c) Mikkelsen, Jr. (US 6,054,071 A) discloses Poled electrets for gyricon-based electric-paper displays with teaching of rung electrodes.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

tt

February 2, 2005


Hung Xuan Dang
Primary Examiner